

SYSTEM AND METHOD FOR MOVING AN OBJECT EMPLOYING PIEZO ACTUATORS

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ABSTRACT

A piezo actuator system, is presented herein. A piezo actuator system comprises a number of piezo actuators which may lengthen and shear. Using the lengthening and shearing, the piezo actuator system grips and moves an object in response to a first and a 10 second control signal, respectively. The possible displacement of the object is limited by the maximum shear of the piezo actuators. To increase the possible displacement, the piezo actuators may be controlled to perform a linear shear sequence or a shuffle sequence. During the linear shear sequence, the object is moved; during the shuffle sequence the object is substantially stationary, while the piezo actuators are repositioned with respect to the object, 15 after which the object may be moved further using the linear shear sequence.

A piezo actuator system may be adapted to perform a slow shuffle sequence, being a relatively slowly performed shuffle sequence, during which the linear shear sequence may be performed simultaneously, preventing any dead time during movement.